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Serial Number: 09/467992

Filing Date: December 20, 1999

Title: CIRCUITS WITH A TRENCH CAPACITOR HAVING MICRO-ROUGHENED SEMICONDUCTOR SURFACES

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on April 17, 2003, and the references cited therewith.

Claims 17, 31, 33, and 41 are amended; as a result, claims 17-19, 22, 23, 25-27, 29, 31-50 are now pending in this application.

§ 103 Rejection of the Claims

Claims 17-19, 31-33, 37, 38, 41-46, 48, 49, and 51 were rejected under 35 USC § 103(a) as being unpatentable over Pfiester (U.S. Patent No. 4,761,385) in view of Kanetaki et al. (U.S. Patent No. 4,906,590).

In dependent claims 17, 31, 33, and 41 are amended. As amended, claims 17, 31, 33, and 41 recite elements that are not found in Pfiester and Kanetaki et al. For example, as amended, claim 17 recites, among other elements, that a first source/drain region, a body region and a second source/drain region "are vertically aligned". Claims 31, 33, and 41 recite elements similar to the elements of claim 17.

Pfiester and Kanetaki do not disclose a first source/drain region, a body region and a second source/drain region that "are vertically aligned". Thus, claims 17, 31, 33, and 41 are patentable over Pfiester and Kanetaki et al. Applicant requests that the rejection of claims 17, 31, 33, and 41 be reconsidered and withdrawn and that claims 17, 31, 33, and 41 and their dependent claims be allowed.

Claims 22-25, 34, and 39 were rejected under 35 USC §103(a) as being unpatentable over Itoh (U.S. Patent No. 4,920,389) in view of Kanetaki et al.

Independent claims 22 and 34 recite, a memory cell having, among other elements, a "vertical transistor" and a source/drain region, in which the source/drain region includes integral therewith a first plate having a polycrystalline surface layer with "etch-roughened" surface.

Itoh does not disclose or suggest anything about a memory cell having the "etch-roughened" surface feature. Kanetaki et al. discloses a capacitor with a plurality hollows. However, neither Itoh nor Kanetaki et al. teaches or suggests a *combination* of a "vertical transistor" *and* a source/drain region, in which the source/drain region includes integral therewith a first plate having a polycrystalline surface layer with "etch-roughened" surface, as claimed in

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claims 22 and 34. Since neither Itoh nor Kanetaki et al. teaches or suggests the *combination* as claimed in claims 22 and 34, the obviousness rejection is based on Applicant's disclosure. Hindsight must be avoid. *In re Bond*, 910 F.2d 831, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990).

The reasons represented above demonstrate that claims 22 and 34 claims are patentable over Itoh and Kanetaki et al. Accordingly, Applicant requests that the rejection of claims 22 and 34 be reconsidered and withdrawn and that claims 22 and 34 and their dependents claims be allowed.

Claims 26, 27, 29, 35, 36, 40, 47, and 50 were rejected under 35 USC § 103(a) as being unpatentable over Itoh in view of Kanetaki et al. as applied to claims 22-25, 34, and 39 above, and further in view of Wahlstrom (U.S. Patent No. 5,396,452).

Independent claims 26 and 35 recite elements similar to the elements of claims 22 and 34. Thus, claims 26 and 35 are also patentable over Itoh and Kanetaki et al. in view of Wahlstrom for the reasons presented above regarding claims 22 and 34. Applicant requests that the rejection of claims 26 and 35 be reconsidered and withdrawn and that claims 26 and 35 and their dependents claims be allowed.

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CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's representative at 612-373-6969 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date 7-17-03

By

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner of Patents, P.O.Box 1450, Alexandria, VA 22313-1450, on this 17th day of July, 2003

- Hmy Mariaty

Name

Signature